502 An investigation into the prevalence of the use of complementary (CM) and over the counter (OTC) medicines (MEDS) by patients (pts) in an adult Cystic Fibrosis centre

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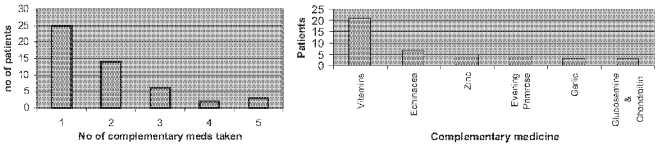
Introduction: Pts at the Manchester Adult Cystic Fibrosis centre are offered an annual review where they are seen by all the members of the multi-disciplinary team. The pharmacist takes a full drug history including CM and OTC MEDS. These additional MEDS are then assessed to identify whether there is any disease or drug interaction with these products. The concept of CM MEDS is explained and advice is offered about suitability, if any evidence is available.
Method: 167 pts were seen during annual review by the Specialist CF Pharmacist and were asked to report any MEDS they took, in addition to those prescribed by the CF centre
Results: *CM MEDS*: Of the 167 pts seen, 50, (30%) (28 male, 22 female) reported taking at least 1 CM medicine in the past year with some taking as many as 5 per day (left-hand graph).
The most popular CM MEDS are shown in the right-hand graph. The vitamins identified are in addition to or instead of those prescribed by the CF centre. Other CM MEDS taken include: Chinese medicine, omega 3, ginseng, acidophilus, cats claw, rescue remedy, turmeric, passiflora, flaxseed, wild yam, dolomite and herbal sleeping aids.



OTC MEDS: 38 pts (23%) (19 males, 19 females) reported taking OTC MEDS. 23 pts took simple analgesics, paracetamol and ibuprofen. 6 reported taking cough MEDS (one formulated for use by horses!). The remaining were cold remedies and skin products.
Conclusion: A significant number of CF patients regularly take CM MEDS and OTC MEDS. Additionally it appears that whilst some patients are reluctant to adhere to conventional MEDS, they are prepared to take CM MEDS even when they had been made aware that they lacked the controls of licensed MEDS in the UK.

503 The use of complementary therapies in an Australian Cystic Fibrosis clinic

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Aims: The aim of this study was to document a number of aspects of complementary therapy use in a CF population including usage prevalence, types of therapy, perception of efficacy, cost and side effects.
Methods: A comprehensive questionnaire about complementary therapy (CT) answered anonymously relating to multiple aspects of CT use and a parental assessment of disease severity.
Results: 70 questionnaires were completed from 100 distributed. The mean age of the patients was 6.72 years (18 months-22 years) and 37 respondents were male, 21 patients (30%) reported regular CT use and 41 patients (70%) denied any CT use. Complementary therapies used included herbal treatments (77%), chiropractic (29%), massage (29%), homeopathy (15%), acupuncture (5%). Only 19% of the patients had made their physician aware. Patients using CT were generally older (mean age 12.15 yrs) and had more significant and deteriorating disease with 43% classed "moderate to severe" in the CT group versus 12% in the non CT group. Yearly hospitalisation rates were 1.01 admissions in the CT group versus 0.59 in the non CT group. Patients using CT tended to have higher numbers of conventional medications. Of the CT users 14% of parents felt their CT treatment was very effective, 43% thought possibly so and the remainder remained hopeful. No major side effects were noted.
Conclusions: Roles of complementary therapy use in CF are significant and often unreported. Although most of these therapies are probably harmless, some have the potential for harm. There is a serious lack of well designed clinical trials to assess efficacy of these treatments in CF. Proactive and non judgmental discussion by the CF physician regarding these therapies should be encouraged.

504* Three methods of monitoring adherence in a long-term trial in Cystic Fibrosis

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Aim: To compare three methods of adherence monitoring in a clinical trial.
Methods: In a double blind, parallel trial, 164 stable subjects with CF aged $\geqslant 6$ yrs were randomly allocated to inhale 4 d mL of 7% (HS) or 0.9% (NS) saline, twice daily, each with a taste masking agent, for 48 weeks. Adherence with the inhalations was monitored in three ways: diary cards completed weekly (DC); return of used and unused ampoules at scheduled visits (RA); and, in a random subset of 145 patients, a device which logged nebuliser use (LD). Subjects were only informed of the logging device on completion of the trial and were given the opportunity to anonymously decline consent to have their data downloaded.
Results: No subjects declined to have the data downloaded. Complete adherence datasets were obtained from 130/145 (90%) of subjects monitored via LD, which was significantly better than the proportion of subjects via DC ($p < 0.01$) and RA ($p < 0.01$). The remaining results are for data from the 129 subjects for whom all monitoring methods were at least 85% complete. Overall adherence via DC (76±27%) was significantly higher than via RA (67±28%) ($p < 0.01$), which was significantly higher than via LD (61±31%) ($p < 0.01$). HS and NS group adherence did not significantly differ 74±27 vs 78±28% (DC), 66±27 vs 69±30% (RA), 64±29 vs 59±33% (LD) (all $p > 0.36$). Adherence was significantly higher in children than adults 86±18 vs 65±31% on DC, and 74±24 vs 61±31% on RA (both $p < 0.01$), but this difference was non-significant on LD. Adherence declined over the year of participation, via all three methods.
Conclusion: Monitoring via LD returned significantly more complete datasets, and may give a more accurate assessment of adherence.

505 Lung HRCT and MRI findings in pediatric patients with Cystic Fibrosis

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High resolution computer tomography (HRCT) has been used to grade the severity of the disease and to follow up the course of lung changes. It seems of utmost importance to develop novel techniques, with no ionizing radiation burden, and which can provide regional lung function data. Magnetic resonance imaging (MRI) is known as a noninvasive method, which uses safe contrast and does not require ionizing radiation. The aim of the study is to compare the accuracy of MRI imaging with HRCT in the detection of the main pulmonary aspects of CF.
Sixteen patients from a CF reference center, 9 male, mean age 11.4 yo (ranged 7–21 yo), were included in the study and submitted to a lung HRCT and a pulmonary parenchyma MRI. HRCT and MRI images were analyzed by two observers by consensus for the presence of bronchiectasis, bronchial wall thickening, mucus plugging, "tree in bud" pattern and consolidation.
Results:

Abnormalities	HRCT		MRI	
	n/total	%	n/total	%
Bronchiectasis	14/16	87.5%	11/16	68.7%
Bronchial wall thickening	16/16	100%	12/16	75%
Mucus Plugging	13/16	81.2%	12/16	75%
"Tree in bud" pattern	14/16	87.5%	12/16	75%
Consolidation	11/16	68.7%	13/16	81.2%

Mucus plugging and "tree in bud" pattern were found in both exams. Bronchiectasis and bronchial wall thickening were more evident on CT images, while consolidation was more frequent on MRI images. There are some limitations for MRI when compared with CT: more expensive, longer breath-hold time, performed only in cooperative patients (> 7 yo), image distortions can be caused by motion artifacts. MRI in CF patients may be a noninvasive method for assessment of CF chronic lung involvement, uses safe contrast which does not require ionizing radiation and is an able tool for evaluating CF in young patients. Improvements in MR techniques will allow us to make even more powerful approaches.